



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,256	08/18/2003	Stephen Paul Zadesky	APL1P284/P3111	4668
67673	7590	07/09/2008	EXAMINER	
APPLE c/o MOFO NOVA 1650 TYSONS BLVD. SUITE 300 MCLEAN, VA 22102			NGUYEN, JIMMY H	
			ART UNIT	PAPER NUMBER
			2629	
			MAIL DATE	DELIVERY MODE
			07/09/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/643,256	ZADESKY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	JIMMY H. NGUYEN	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 16 April 2008.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 46-74 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 46-74 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 2/19/2008 & 4/16/2008.

4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application

6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/16/2008 has been entered. Claims 46-74 are currently pending in the application. An action follows below:

### ***Information Disclosure Statement***

2. The information disclosure statements (IDS) submitted on 2/29/2008 and 4/16/2008 are being considered by the examiner.

3. Note that Applicant has submitted a large number of prior arts which are not related to the invention of the instant application. In order to help the examiner to expedite the instant application, examiner suggests the applicant to limit a number of the prior arts, which are related to the invention, or to include a concise explanation of the relevance.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 46-49, 52-57, 60-62, and 65-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (JP H9-251347, cited in IDS filed 8/31/2007), and in view of Chalk et al. (WO 03/044645 A1, cited in IDS filed 8/31/2007).

As to claim 46-48, 52, 54-56, 61, and 66, Takahashi discloses a portable media player (a mobile terminal 21; Fig. 2, para. [0019]) comprising:

**a housing** (Fig. 2) including **a frame** (Fig. 2); and

**an input device** (a coordinate input device **22/51**; Figs. 2 and 5) comprising **a touchpad**

(a touch panel **52**; Fig. 5) associated with the housing and configured to receive rotational inputs (based on paragraph 21, when the user moves a contact finger in a rotational direction, the touchpad would receive rotational inputs), and capable of a gimbal action relative to the housing (see Figs. 5b-5d).

Further, as shown in Figs. 5b-5d and noting in paragraphs 39-41, Takahashi teaches that the gimbal action of the touchpad (52) is configured to enable the touchpad (52) to float relative to the housing while being constrained thereto, thereby enabling the touchpad to rotate about an axis by pressing on the left or right side of the touchpad (52). In other words, Takahashi teaches the touchpad (52) moving in a single degree of freedom relative to the housing. The above mentioned disclosure also teaches a left rotation of the touchpad to cause a left click action for making a selection and a right rotation of the touchpad to cause a right click action for making a selection.

Further, as shown in Figs. 5b-5d and noting in paragraphs 39-41, Takahashi further teaches the touchpad comprising two spatially distinct zones, one corresponding to the left side (or left zone) of the touchpad having a corresponding indicator (a left button apparatus 55) for generating a distinct user input signal (a left click action signal) when the touchpad is depressed in the left zone and another corresponding to the right side (or right zone) of the touchpad having

a corresponding indicator (a right button apparatus 57) for generating a distinct user input signal (a right click action signal) when the touchpad is depressed in the right zone.

Takahashi does not teach the touchpad (52) moving in a multiple degrees of freedom and each of the multiple degrees of freedom is associated with a function of the device, as presently claimed.

Accordingly, Takahashi discloses all limitations of these claims except for the touchpad moving in a multiple degrees of freedom and each of the multiple degrees of freedom is associated with a function of the device, as presently claimed.

However, Chalk discloses a device (10) including a cradle (14; Fig. 2D) capable of a gimbal action relative to the housing (11; Fig. 2D) and the gimbal action of the cradle (14) being configured to enable the cradle (14) to float relative to the housing (11) while being constrained thereto (Fig. 2D), thereby **enabling the cradle (14) to move in multiple degrees of freedom relative to the housing (11), wherein each of the multiple degrees of freedom is associated with a (East, North, South, or West click) function of the device** and the gimbal action of the cradle enables a user to made a selection (Figs 4-8). The movement of the cradle in additional degrees of freedom provides the device capable of providing more functions associated with the additional degrees of freedom. Thus, it would have been obvious to one of ordinary skill in the art to apply the technique of moving the cradle in multiple degrees of freedom relative to the housing, wherein each of the multiple degrees of freedom is associated with a function of the device, as taught in the Chalk reference, to improve the device of Takahashi for the predictable result of enabling the touchpad to move in multiple degrees of freedom relative to the housing,

thereby providing each of the multiple degrees of freedom associated with a function of the device.

As to claims 49, 57 and 62, Chalk teaches the cradle (14) comprises four (East, West, North, and South) spatially distinct zones (Fig. 2A, 4A). Accordingly, Takahashi in view of Chalk discloses the touchpad comprising four spatially distinct zones.

As to claims 53, 60, and 65, Takahashi discloses an input surface of the touchpad (52) being substantially co-planer with an external surface of the housing (see Fig. 2).

As to claims 67-70, Takahashi discloses that the housing defines a space and the touchpad and the housing are configured to enable the touchpad to float within the space of the housing (see Figs. 2 and 5a-5d).

As to claims 71-74, Takahashi discloses the touchpad configured to enable left and right click actions (see paragraphs 39, 40).

6. Claims 50, 51, 58, 59, 63, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi in view of Chalk, as applied to claims 46, 54, and 61, and further in view of Trent, JR. et al. (US 2004/0252109 A1), hereinafter Trent.

As to claims 50, 51, 58, 59, 63, and 64, as discussed in the rejection of independent claims 46, 54, and 61 above, Takahashi in view of Chalk discloses all limitations of these claims except that Takahashi does not explicitly teach that the touchpad is based on a polar coordinate system, as presently recited in claims 50, 58 and 63, and the touchpad is circular, as presently recited in claims 51, 59, and 64.

However, Trent discloses a circular touchpad (a touch sensor, e.g., see Fig. 3, 37, or 38) based on a polar coordinate system (see paragraph [0090]). Trent further teaches that the benefit

of using the circular touchpad (the touch sensor) based on the polar coordinate system is to provide a user a number of functions associated with a particular application (see Fig. 38; paragraph [0137]). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to replace the Takahashi rectangular touchpad with a circular touchpad based on a polar coordinate system, in view of the teaching in the Trent reference, because this would provide a user a number of functions associated with a particular application of the Takahashi device, as taught by the Trent reference (see Fig. 38; paragraph [0137]).

7. Claims 50, 51, 58, 59, 63, and 64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi in view of Chalk and further in view of Matzke et al. (US 4,736,191), hereinafter Matzke.

As to claims 50, 51, 58, 59, 63, and 64, as discussed in the rejection of independent claims 46, 54, and 61 above, Takahashi in view of Chalk discloses all the claimed limitations of these claims except that Takahashi does not explicitly teach that the touchpad is based on a polar coordinate system as presently recited in claims 50, 58 and 63 and the touchpad is circular as presently recited in claims 51, 59, and 64.

However, Matzke discloses a circular touchpad (a touch pad 14, see Fig. 1) based on a polar coordinate system (see col. 8, lines 22-27). Matzke further teaches that the benefit of using the circular touchpad (the touch sensor) based on the polar coordinate system is to provide a user capable of commanding movement of the cursor in essentially any angular direction rather than being limited to translation of the cursor in only certain angular directions (see col. 3, lines 26-31). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of

the invention was made to replace the Takahashi rectangular touchpad with a circular touchpad based on a polar coordinate system, in view of the teaching in the Matzke reference, because this would provide a user capable of commanding movement of the cursor in essentially any angular direction rather than being limited to translation of the cursor in only certain angular directions, as taught by the Matzke reference (see col. 3, lines 26-31).

***Double Patenting***

8. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

9. Claims 46-74 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 6, 7, 11, 16 and 19 of U.S. Patent No. 7,046,230 B2, hereinafter Patent230 in view of Takahashi and Chalk.

As to claims 46-48, 50-56, 58-61 and 63-74, claims 1, 6, 7, 11, 16 and 19 of Patent230 are directed to a portable media player comprising all limitations of the pending claims 46-48, 52-56, 60, 61, 65-74 except for the limitations, “ a touchpad capable of a gimbal action relative to the housing, wherein the gimbal action of the touchpad is configured to enable the touchpad to float relative to the housing while being constrained thereto, thereby enabling the touchpad to move in multiple degrees of freedom relative to the housing, wherein the gimbal action of the

touchpad enables a user to make a selection", "the touchpad comprising a plurality of spatially distinct zones, each of the zones having a corresponding indicator for generating a distinct user input signal when the touchpad is depressed in the region of the zone", as presently claimed.

However, Takahashi **an input device** (a coordinate input device **22/51**; Figs. 2 and 5) comprising **a touchpad** (a touch panel **52**; Fig. 5) associated with the housing and configured to receive rotational inputs (based on paragraph 21, when the user moves a contact finger in a rotational direction, the touchpad would receive rotational inputs), and capable of a gimbal action relative to the housing (see Figs. 5b-5d). Further, as shown in Figs. 5b-5d and noting in paragraphs 39-41, Takahashi teaches that the gimbal action of the touchpad (52) is configured to enable the touchpad (52) to float relative to the housing while being constrained thereto, thereby enabling the touchpad to rotate about an axis by pressing on the left or right side of the touchpad (52). In other words, Takahashi teaches the touchpad (52) moving in a single degree of freedom relative to the housing. The above mentioned disclosure also teaches a left rotation of the touchpad to cause a left click action for making a selection and a right rotation of the touchpad to cause a right click action for making a selection. Further, as shown in Figs. 5b-5d and noting in paragraphs 39-41, Takahashi further teaches the touchpad comprising two spatially distinct zones, one corresponding to the left side (or left zone) of the touchpad having a corresponding indicator (a left button apparatus **55**) for generating a distinct user input signal (a left click action signal) when the touchpad is depressed in the left zone and another corresponding to the right side (or right zone) of the touchpad having a corresponding indicator (a right button apparatus **57**) for generating a distinct user input signal (a right click action signal) when the touchpad is depressed in the right zone.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify the touchpad of the device of claims 1, 6, 7, 11 and 16 of Patent230, in view of the teaching in the Takahashi reference, because this would provide a user a touchpad with multiple click input actions such as left and right click functions, and allow the user to activate these click input actions without removing the contact finger from the touchpad, as taught by Takahashi (see Abstract).

Accordingly, the device of claims 1, 6, 7, 11 and 16 of Patent230 in view of the teaching in the Takahashi reference does not include “the touchpad moving in a multiple degrees of freedom and each of the multiple degrees of freedom is associated with a function of the device”, as presently claimed.

However, Chalk discloses a device (10) including a cradle (14; Fig. 2D) capable of a gimbal action relative to the housing (11; Fig. 2D) and the gimbal action of the cradle (14) being configured to enable the cradle (14) to float relative to the housing (11) while being constrained thereto (Fig. 2D), thereby **enabling the cradle (14) to move in multiple degrees of freedom relative to the housing (11), wherein each of the multiple degrees of freedom is associated with a (East, North, South, or West click) function of the device** and the gimbal action of the cradle enables a user to make a selection (Figs 4-8). The movement of the cradle in additional degrees of freedom provides the device capable of providing more functions associated with the additional degrees of freedom. Thus, it would have been obvious to one of ordinary skill in the art to apply the technique of moving the cradle in multiple degrees of freedom relative to the housing, wherein each of the multiple degrees of freedom is associated with a function of the device, as taught in the Chalk reference, to improve the device of claims 1, 6, 7, 11 and 16 of

Patent230 in view of the teaching in the Takahashi reference, for the predictable result of enabling the touchpad to move in multiple degrees of freedom relative to the housing, thereby providing each of the multiple degrees of freedom associated with a function of the device.

As to claims 49, 57 and 62, Chalk teaches the cradle (14) comprises four (East, West, North, and South) spatially distinct zones (Fig. 2A, 4A). Accordingly, the device of claims 1, 6, 7, 11 and 16 of Patent230 in view of the teaching in the Takahashi and Chalk references discloses the touchpad comprising four spatially distinct zones.

***Response to Arguments***

10. Applicant's arguments, see pages 7-8 of the amendment filed on 4/16/2008, with respect to the rejections under 35 USC 102 and 103 and the double patenting rejection in the Office Action dated 12/12/2007, have been fully considered and are persuasive in light of the amendments to all independent claims 46, 54, 61 and 66. However, upon further consideration, the new grounds of rejections are made above.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is 571-272-7675. The examiner can normally be reached on Monday - Friday, 6:30 a.m. - 3:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached at 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jimmy H Nguyen/

Primary Examiner, Art Unit 2629